2-1984

Contact lens trends among Wyoming Optometrists

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Abstract

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Degree Type

Thesis

Degree Name

Master of Science in Vision Science

Committee Chair

James Peterson

Subject Categories

Optometry

Contact Lens Trends Among Wyoming Optometrists

by

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A Thesis Presented to the Faculty
of Pacific University in Partial Fulfillment of
the Requirement for the Degree
Doctor of Optometry

February 1984

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ACCEPTED BY

James Peterson, O.D.

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ABSTRACT

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INTRODUCTION

Over the past 10 years soft contact lenses have been the lenses of choice amongst optometrists fitting first time wearers; Statistically the decade of the 70's belongs to soft lenses. In fact, it appeared for a time that new hard contact lens fits would virtually cease to occur.

While soft contact lenses will remain very popular with both optometrists and contact lens wearers, gas permeable rigid lenses have added a new positive dimension to the contact lens picture, and promise to gain both practitioner and patient approval.

A poll conducted and published by Review of Optometry states, "For the first time ever, optometrists who have a preference would rather fit contact lenses than glasses."[13] The contact lens field is a challenging, expanding field. Torics, Extended wear lenses, rigid gas permeable, and bifocal contact lenses all promise to grow and develop rapidly.

A survey conducted by Arthur D. Little; Inc. in 1980 presents a brief overview of the present and future status of hard gas permeable, and soft contact lenses.[1] On the following page is a summary table:

THE OUTLOOK FOR CONTACT LENSES IN THE 1980's

% New Fits

	North America		Europe			Asia
	U.S.	Canada	England	France	Germany	Japan
			1980			
HARD*	20	20	50	30	20	60
GAS PERM	10	30	15	10	30	5
SOFT	70	50	35	60	50	35
			1985			
HARD*	5	15	30	15	10	35
GAS PERM	25	55	30	10	35	20
SOFT	70	30	40	75	55	45

Source: Projections from Arthur D. Little, Inc. Survey, January 1981. Overall, in 1980, 62% of new wearers were fitted with soft lenses, 9% with gas permeables, and 29% with conventional hard materials. This survey seems to point towards increased use of gas permeable contact lenses.

The purpose of this study is to monitor some of the general trends and preferences in the rapidly changing field of contact lenses.

*Hard means PMMA type lens

METHODOLOGY

With the aid of Dr. James Peterson a survey was designed which would be short and concise, easy to fill out, yet give us enough information to make the data collected useful. (A copy of the survey and sample cover letter can be found in Appendix A).

Forty Wyoming optometrists were selected from the "1982 Blue Book". A survey was sent to at least one practitioner in every town listed in Wyoming in "the Blue Book" in order to obtain as broad a geographical survey as possible for the state. In the towns which listed more than one optometrist, practitioners were selected at random.

Surveys were mailed November 15, 1984 and a two month interval was given for the return of the completed forms. Five of the 40 surveys mailed were returned because of an inability of the postal system to locate the practitioner. Twenty-seven surveys were returned prior to January 15th for a 77% return.

RESULTS

The data were analyzed first by taking the group as a whole and then by dividing the practitioners into two groups. The first group consisted of those optometrists who had been in practice less than 10 years. The second group consisted of those who had been in practice 11 years or greater. Table #1 shows the breakdown of years in practice for those surveyed practitioners who responded.

Table 1. Shows number of surveys received per years in practice category.

Number of responses	0-5	6-10	11-15	16-20	21-25	26-30	31-35
10							
9							
8	25.9%						
7	XXXXX	22.2%					
6	XXXXX	XXXXX					18.5%
5	XXXXX	XXXXX	14.8%				XXXXX
4	XXXXX	XXXXX	XXXXX	11.1%			XXXXX
3	XXXXX	XXXXX	XXXXX	XXXXX	7.5%		XXXXX
2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX		XXXXX
1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX		XXXXX

Responding practitioners reported that 8% to 70% of their practices were contact lens related. 23.7% was the average proportion of contact lens patients. A little over two-thirds (68.5%) of contact lenses fit were soft lenses. The remaining rigid lens fits were mostly gas permeable lenses (28.3%). PMMA lens fits were virtually non-existant, 2.4% being the average percentage.

80% of the responses claimed an increase in the proportion of soft contact lenses fit in their offices over the past five years, while 72% expected an increase in rigid gas permeable fits in the next 10 years.

A breakdown of the responses for questions 7 - 12 involving advantages, disadvantages and causes of termination of rigid and soft contact lenses can be found in Appendix B. The main points, however,are as follows:

1) Major advantages of rigid contact lenses.
   a) Acuity (19 responses)
   b) Durability (12 responses)
   c) Ease of Handling (10 responses)
   d) Astigmatism correction (7 responses)
2) Major disadvantages of rigid contact lenses.
   a) Initial discomfort (21 responses)
3) Most common causes of rigid contact lens termination
   a) Discomfort (18 responses)
4) Major advantages of soft contact lenses.
   a) Comfort (24 responses)
5) Major disadvantages of soft contact lenses.
   a) Short life span - lack of durability (18 responses)
   b) Care and handling (10 responses)
6) Most common causes of soft contact lens termination
   a) Poor vision (11 responses)
   b) Lost or damaged lenses (9 responses)
   c) Lack of motivation (8 responses)

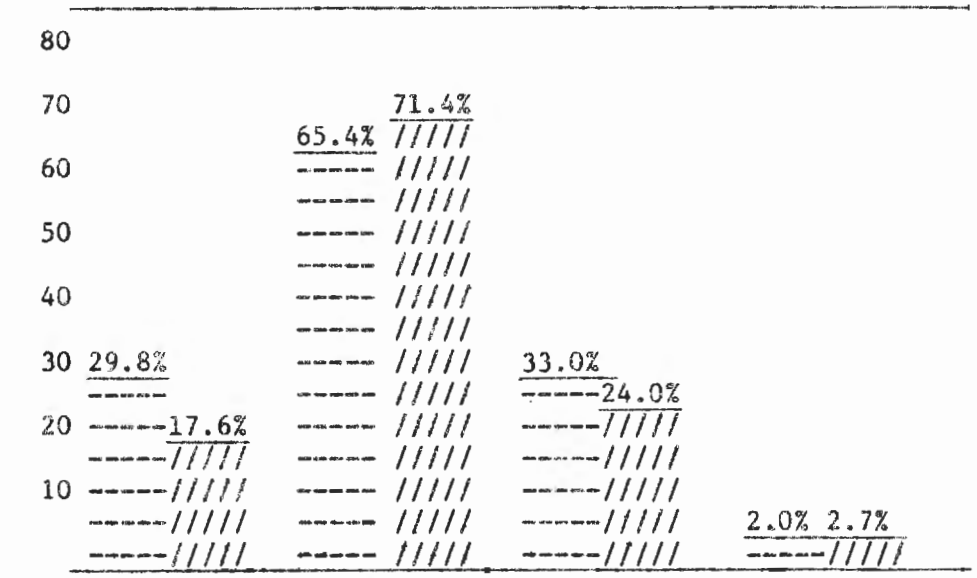
14,8% of responders rarely modify contact lenses. 22.2% modify sometimes, while 63.0% modify regularly.

Every practitioner responding to our survey fit extended wear contact lenses. 48.1% fit extended wear lenses on a regular basis. When asked about the physiological safety of extended wear lenses, 46% felt the extended wear lenses are safe, 34% felt that they were safe on some patients if the lenses were carefully monitored, 12% weren't sure about the safety of the lenses while 8% felt that extended wear lenses were unsafe.

The two most preferred rigid gas permeable lenses were Polycon and Boston II. The most popular spherical soft lenses were Bausch and Lomb and CSI. Hydrocurve was the most often preferred toric soft lens. Bausch and Lomb and CIBA were the most popular bifocal soft contact lenses. In the extended wear lens category Hydrocurve was the most preferred lens. Most practitioners responding to our survey didn't fit PMMA lenses at all. There was no strong brand preferrence for PMMA type lenses. Brand preferrence for the different types of lenses are listed in detail in Appendix C.

When comparing the responses of those who had been in practice more than 10 years (Group B) to those who had practiced less than 11 years (Group A), it was found that the younger group fit a higher percentage of contact lenses on the average than the older group (29.8% vs 17.6%). See Table 2. Group B practitioners were also less likely to modify rigid contact lenses than the younger practitioners. (21.4% of the older group didn't modify lenses, as compared to 7.7% of the younger group.) The overall trend was for modification. 85% of the combined group modified rigid lenses. It was also found that the older group of practitioners were more hesitant to fit extended wear lenses than the less than 11 years in practice group. None of the practitioners responding to the survey in the younger group felt that extended wear lenses were unsafe physiologically. The older group tended to fit a higher percentage of soft lenses, a higher percentage of PMMA rigid lenses and a lower percentage of gas permeable lenses than the younger practitioners. (Statistical comparisons for the two groups can be found in Appendix D.)

TABLE 2



(3-10 years) Group A -----

(11-35 years) Group B /////

The proportion of soft, plus gas permeable, plus PMMA contact lenses does not totally exactly 100% as expected because of a few individual respones which failed to total 100% for one reason or another.

DISCUSSION

A nationwide eye care professional survey has been conducted by the Vision Care Survey since 1977. Each year over 2,400 interviews are completed.

Results from the most recent survey parallel our findings quite closely.[5] Conclusions drawn from Vision Care Survey were;

1) New contact lens patients will continue to increase after the next two to three years, but at a slower rate.

2) A leveling in new contact lens patients can be expected in the late 1980's.

3) Use of gas permeable hard lenses is likely to continue to grow.

Statistics gathered by the Vision Care Survey in 1982 show that 69% of contact lens patients at surveyed optometric offices obtained soft lenses, 21% gas permeable hard lenses, and 9% PMMA hard lenses. The results obtained from our Wyoming Survey were virtually identical for soft contact lenses. More gas permeable hard lens fits (28.3%) and less PMMA hard lens fits (2.4%) were found by our study however.

CONCLUSION

Our study confirmed a continued enthusiasm for contact lens in general and for soft contact lenses in particular. However, responding practitioners predict that rigid gas permeable contact lenses fits will become more popular in the future. The major advantages reported for hard contact lenses were acuity, durability and ease of handling, while the major disadvantage reported was, discomfort. The major advantage of soft lenses is comfort. Disadvantages reported for soft lenses were lack of durability, care and handling requirements, and poor vision. Most practitioners modify rigid lenses in their offices. Most practitioners fit extended wear lenses, although some practitioners are still uncertain about the physiological safety of extended wear lenses. The Polycon was the most preferred gas permeable lens. Bausch & Lomb took first place in the spherical soft and bifocal soft categories, while Hydrocurve lenses were most often preferred for Toric soft and extended wear lenses.

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APPENDIX A

Cover letter and
Survey Form

PACIFIC
UNIVERSITY
COLLEGE OF
OPTOMETRY

November 10, 1983

As a requirement for graduation from Pacific University College of Optometry, students are required to participate in some form of research. In our efforts to find a project that would be worthwhile to ourselves and the optometric community as a whole, we asked Dr. James Peterson for suggestions. Dr. Peterson suggested a survey of practicing O.D.s concerning contact lens use and preference.

Recognizing your time commitments and realizing that there are many things you would rather do than fill out an extensive survey, we have made an effort to keep our questions short and easy to answer. We have also included an addressed envelope including postage to keep it as simple as possible for you. We hope you will see the merit of our survey. We feel that your honest input combined with the input from other selected O.D.s in Wyoming can benefit every practicing O.D. who works with contact lenses. Your participation is greatly appreciated.

Thank you for your time.

Sincerely,

Clark A. Jensen

CAJ:mg

Enclosures

2043 COLLEGE WAY FOREST GROVE, OREGON 97116 TELEPHONE (503) 357-6151

PRACTITIONER CONTACT LENS SURVEY

1. How many years have you been in practice? _____
2. How long have you been fitting contact lenses? _____
3. Approximately what proportion of your patients do you fit with contact lenses? _____
4. Approximately what percentage of your contact lens patients are fit with:
   a. rigid PMMA lenses _____
   b. rigid gas permeable lenses _____
   c. soft lenses _____
5. Has the proportion of soft contact lenses fit in your office increased over the past five years? _____
6. Do you predict an increase in the proportion of rigid gas permeable contact lenses fit in your office over the next ten years? _____
7. What do you consider to be the major advantages of rigid contact lenses?

   _____

   _____
8. In your opinion, what are the major disadvantages of rigid contact lenses?

   _____

   _____
9. What are the most common causes of termination of rigid contact lens wear in your practice?
   a. _____
   b. _____
   c. _____
10. What do you consider to be the major advantages of soft contact lenses?

    _____

    _____
11. In your opinion, what are the major disadvantages of soft contact lenses?

    _____

    _____
12. What are the most common causes of termination of soft contact lens wear in your practice?
    a. _____
    b. _____
    c. _____
13. Do you modify rigid contact lenses in your office?
    a. almost never _____
    b. sometimes _____
    c. regularly _____
14. Do you fit extended wear contact lenses?
    a. almost never _____
    b. sometimes _____
    c. regularly _____
15. Do you feel extended wear contact lenses are physiologically safe? _____
16. Please list the brand names of the lenses you prefer in the following categories:
    a. Gas permeable (rigid) 1) _____ 2) _____
    b. Spherical soft 1) _____ 2) _____
    c. Toric soft 1) _____ 2) _____
    d. Bifocal soft 1) _____ 2) _____
    e. Extended wear 1) _____ 2) _____
    f. PMMA spherical 1) _____ 2) _____
    g. PMMA torics 1) _____ 2) _____
    h. PMMA bifocals 1) _____ 2) _____

APPENDIX B

Summary of advantages, disadvantages, and causes for termination of rigid and soft contact lenses. (Questions 7-12 on survey)

(7) What do you consider to be the major advantages of rigid contact lenses?

	Responses	Number of responses
a)	Acuity	19
b)	Durability	12
c)	Ease of handling	10
d)	Astigmatism Correction	7
e)	Health of the eye	2
f)	Ability to modify	1
g)	Gas perm lenses are the lens of choice following PMMA	1
h)	Simplicity to fit	1

(8) In your opinion, what are the major disadvantages of rigid contact lenses?

	Responses	Number of responses
a)	Initial discomfort	21
b)	Corneal disturbances	6
c)	Dust and wind problems	6
d)	Lost more often than soft lenses	4
e)	Adaptation time	4
f)	Dryness problems	2
g)	Trauma risk while inserting lens	2
h)	Brittleness	1
i)	Easily decentered	1
j)	Difficulty with near point activities	1

(9) What are the most common causes of termination of rigid contact lens wear in your practice?

	Responses	Number of responses
a)	Discomfort	18
b)	Motivation (lack of)	6
c)	Lost lens	6
d)	PMMA corneal physiology problems (distortions, loss of wearing time)	6
e)	Dust, wind, dryness problems	6
f)	Change to soft lenses	3
g)	Allergies	2
h)	Dr.'s advice	1
i)	Birth control pills	1
j)	Overwear	1
k)	Poor vision	1
l)	Injection	1
m)	Scratched lenses	1

(10) What do you consider to be the major advantages of soft contact lenses?

Responses	Number of responses
a) Comfort	24
b) Lack of dust, wind problems	5
c) Quick patient adaptation	4
d) Length of wearing time	3
e) Ease of replacement	3
f) Ease of fitting	2
g) Lens stability	2
h) Fewer corneal problems	1
i) Small loss factor	1
j) Oxygen transmission	1

(11) In your opinion, what are the major disadvantages of soft contact lenses?

Responses	Number of responses
a) Short life of lenses - lack of durability	18
b) Care and handling	10
c) Poor vision	9
d) Protein, lipid deposits	5
e) Higher replacement	4
f) Cost	2
g) Poor bifocal contacts	1

(12) What are the most common causes of termination of soft contact lens wear in your practice?

Responses	Number of responses
a) Lost or damaged lenses	9
b) Lack of motivation	8
c) Poor vision	11
d) Dirty lenses (lipid & protein buildup	5
e) Lack of proper care	4
f) Expense	4
g) Solution sensitivity	3
h) GPC, allergies	3
i) Keratitis and other corneal problems	2
j) Neovascularization	1

APPENDIX C

Summary of lens preference

(Question #16 on survey)

a) Gas Permeable lenses (rigid)

Brand Name Preferred	Number of responses
Polycon	20
Boston II	11
Optacryl	6
Paraperm	5
Dow Corning	1
Rx 56	1
Durasil	1

b) Spherical Soft

Brand Name Preferred	Number of responses
B & L	14
CSI	10
Aqua Flex	7
AO	5
Hydrocurve	3
Hydron	2
O & E	2
O_2T	1
Vista Marc	1
Amsof thin	1
Hydracon	1

c) Toric Soft

Brand Name Preferred	Number of responses
Hydrocurve	18
B & L	10
Hydromarc	8
CIBA	3
Rotisoft +	2
Wesley Jesson	2
Hydron	1
Opteck +	1
Opticon *	1

d) Bifocal Soft

Brand Name Preferred	Number of responses
B & L	17
CIBA	10
Wesley Jesson	3
Mono Vision *	1

* Not a brand name, listed as reported

+ Not on list of approved lenses

e) Extended Wear

Brand Name Preferred	Number of responses
Hydrocurve	19
B & L	9
Permalens	5
CSI	4
Vistacon	2
AO	2
Genesis 4	1
Sauflon 70	1
Vistamarc	1

f) PMMA Spherical

Brand Name Preferred	Number of responses
Vision Ease	4
Paragon 18	3
BP Flex	2
Wesley Jesson	2
MCM	1
Danker	1
Bronstein	1
Precision Cosmet	1

APPENDIX D

Statistical comparision between responding practitioner$ group$

	Group A	Group B
Years in practice	3 - 10 years	11-35 years
Number of practitioners	13	14
Approximate % of patients fit with contact lenses	Mean (u) = 29.8% Range = 10 - 70% S.D. = 20.2% Standard Deviation (S.D.)	Mean (u) = 17.6% Range = 8 - 45% S.D. = 10.8%
Approximate % of contact lens patients fit with:		
Rigid PMMA Lenses	u = 2.0% Range = 3.6% S.D. = 0 - 12%	u = 2.7% Range = 0 - 10% S.D. = 3.7%
Rigid gas permeable lens	u = 33% Range = 10 - 50% S.D. = 11.8%	u = 24.0% Range = 2 - 45% S.D. = 14.4%
Soft Lenses	u = 65.4% Range = 50 - 90% S.D. = 11.8%	u = 71.4% Range = 48 - 96% S.D. = 15.3%
Have soft contact lens fits increased in your practice over the past 5 years?	69.3% yes	92.3% yes
Do you predict an increase in the proportion of rigid gas permeable contact lenses fit in your office over the next 10 yrs.	76.9% yes	69.2% yes
Do you modify?	almost never 7.7% sometimes 23.0% regularly 69.3%	almost never 21.4% sometimes 21.4% regularly 57.2%
Do you fit extended wear lenses?	almost never .0% sometimes 38.5% regularly 61.5%	almost never 0% sometimes 64.3% regularly 35.7%
Do you feel extended wear contact lenses are physiologically safe?	Yes 46.2% Qualified Yes 53.8%	Yes 50.0% No 35.7% Qualified Yes 14.3%